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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,336	10/14/2003	Robert D. Keefover	DKT 03016 (BWI-00087)	1254

7590 09/15/2005

Patent Docket Administrator
BorgWarner Inc.
3850 Hamlin Rd.
Auburn Hills, MI 48326

EXAMINER

AURORA, REENA

ART UNIT	PAPER NUMBER
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2862

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/685,336	Applicant(s) KEEFOVER ET AL.	
	Examiner Reena Aurora	Art Unit 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 18 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 - 7, 9, 12 - 15 and 18 is/are rejected.
- 7) ☒ Claim(s) 4, 10, 11, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/05/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the changing of the sensor signal by the first and second output circuit as claimed in claims 4, 11 and 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5 – 7, 12, 13, 14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Clymer et al. (5,525,901).

As to claims 1 and 14, Clymer et al. (hereinafter Clymer) discloses a sensing system and method including a single sensor element (A, fig. 10), said single sensor element (A) providing a sensor signal (21a) that varies with the measured parameter (angular position, col. 14, lines 55 - 56); a first output circuit (25) responsive to the sensor signal (21a) and providing a first output signal (x); and a second output circuit (29) responsive to the sensor signal (21b) and providing a second output signal (z), wherein the first (21a) and second (21b) output signals are two of multiple outputs from the sensor element (A).

As to claims 5 and 12, Clymer discloses that the sensor element is a magnetoresistive sensor (col. 7, lines 33 - 34)

As to claims 6, 7, 13 and 18, Clymer discloses that the sensing system monitors the condition of a parameter or component in a vehicle (col. 12, lines 35 - 40)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clymer et al. (5,525,901) in view of Norgauer (5,136,880).

As to claims 2, 9 and 15, Clymer fails to show shared circuits coupled to the sensor element and the first and second outputs circuits, the shared circuits including circuit elements used by both the first and second output circuits. Norgauer discloses an arrangement for detecting a changing operating parameter including shared circuits (34, 36, fig. 1) coupled to the sensor element (16) and the first and second outputs circuits (28, 30), the shared circuits (34, 36) including circuit elements used by both the first and second output circuits (28, 30). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Clymer with the teachings of Norgauer to include shared circuits to used by sensor element and first and second output circuits to reduce the size of the device by reducing the number of components.

Allowable Subject Matter

Claim 8 is allowed.

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The following is a statement of reasons for the indication of allowable subject matter: As to claim 8, the prior art fails to show a supervisor circuit monitoring the sensor element and the output circuits, the supervisor circuit forcing the first or second output signals to change to a diagnostics range in response to a problem with the sensor element or the output circuits. These features taken together with the other limitations of the claim renders the claims allowable over prior art.

Claims 3, 4, 10, 11, 16 and 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 3, 10 and 16, the prior art fails to show a supervisor circuit monitoring the sensor element and the output circuits, the supervisor circuit forcing the first or second output signals to change to a diagnostics range in response to a problem with the sensor element or the output circuits. These features taken together with the other limitations of the claim renders the claims allowable over prior art.

As to claims 4, 11 and 17, the prior art fails to show the first output circuit and the second output circuit changes the sensor signal in a different manner so that the first output signal and the second output signal change differently from each other during normal operation of the system. These features taken together with the other limitations of the claim renders the claims allowable over prior art.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Reena Aurora